Potomac Basin

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Potomac sunrise, Colonial Beach, Va.

C. Dalpra

2009 ICPRB Projects

The Economy Eventually Will Rebound: Will the River?

The news on both the economy and the Potomac River has been pretty grim for some months, and the short-term forecasts for the health of both are downright depressing. During the past year, the Potomac's problems have been noted in a string of reports from the Potomac Conservancy, Chesapeake Bay Foundation, and other groups. Ongoing research by the U.S. Geological Survey and other agencies have noted continuing problems, with nutrients, dissolved oxygen, and sediment loads as well as manmade organic compounds such as pesticides, personal care products, and pharmaceuticals.

The federal government is aggressively taking action to staunch the financial crisis. Regional governments have, for decades, been addressing threats to preserving and protecting the values of the Potomac River. The outcome of either

seems up in the air.

Political leaders and economists, however, tell us that there will be a period of pain and loss, but that the economy will definitely turn around one day-times will get better again. Unfortunately, there are no experts distilling similar wisdom about the Potomac River and its associated natural resources, on which the region depends.

The Potomac jurisdictions' budgets have generally been flat or declining during the past decade. The jurisdictional governments are now trying to deal with steep declines in revenue with cuts to various programs, including furloughs or layoffs of workers.

With so much pain to be shared, eliminating or curtailing environmental restoration efforts are tempting targets for budget savings, but may carry only a near-term benefit, if any at all. Existing programs have at best been holding the line on river

Our mission is to enhance, protect and conserve the water and associated land resources of the Potomac River and its tributaries through regional and interstate cooperation.

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health in the face of rapid growth and development that the economic bubble fostered. As with the Chesapeake Bay cleanup, the general consensus is that much more needs to be done to move the Potomac toward greater health.

Another general consensus is that delaying restoration too long could see the river ecosystem reaching a tipping point after which full restoration efforts will produce limited results. While none even dream of returning the river to its precolonial granduer, the river's current restoration trajectory keeps diminishing the goals that are set. Even if a tipping point is not reached, delays will only make meeting restoration goals more costly from both environmental decay and economic inflation.

It is important that as a society we avoid compromising our environmental values. Hard economic times that reduce the pace of development may provide some breathing room that could help retain or even recover the gains we have made over several decades.

At the same time, ICPRB is assisting its cash-strapped jurisdictions to meet requirements, such as creation of total daily maximum load (TMDL) plans that are pollution budgets for impaired waterways, modeling and research that guides cleanup initiatives for the Potomac and Chesapeake Bay, fisheries and habitat restoration, coordinated efforts to protect water supply quality and volume, and outreach and education that empowers the public to support these measures.

In 2009, ICPRB will continue its integrated efforts to improve the Potomac in a number of areas.

Assisting the Jurisdictions with Water Quality, Restoration Plans

In the past year, several university and organization reports have pointed to declines in water quality in the watershed. Many watersheds in the Potomac basin fail to meet the periodic assessments of waterways required under the federal Clean Water Act. The Potomac basin jurisdictions, under the Clean Water Act, are required to devise restoration plans for waters that do not meet water quality standards. Total Maximum Daily Loads (TMDLs), are studies that determine the sources and concentrations of the pollutant causing the impairment and the reductions needed at each source to restore the stream to health.

The ICPRB has become increasingly involved in helping the Potomac jurisdictions with these studies, particularly when the waterway is shared by two or more jurisdictions. Cooperation among the jurisdictions in interstate watersheds brings efficiency and value to the studies. Jurisdictions can combine resources with



An Anacostia TMDL can be one of the tools that can make cleanups less necessary. This year's Potomac Watershed Cleanup is April 4.

ICPRB to produce a study that can integrate the needs of the multiple jurisdictions with cooperative studies and plans. The ICPRB has worked on many studies in the watershed, including the mainstem Potomac and Anacostia rivers.

In 2009, ICPRB is focusing on sites in Maryland and Virginia with basic research to be used on TMDLs throughout the region. The ICPRB is assisting the Maryland Department of the Environment (MDE) through modeling and other analysis that will develop methods to assess nutrients, biological impairments, tidal nutrients and sediments, and in better model calibration. The effort will help produce templates for assessments of streams in the watershed with those impacts, and increases ICPRB expertise. The assistance includes work with Chesapeake Bay Program modelers to ensure that the Chesapeake Bay Program's Phase 5 Watershed Model that is used in the bay cleanup and generates useful data for TMDLs.

In Maryland, ICPRB is completing technical work for nutrient TMDLs for the impaired watersheds of Evitts, Seneca and Cabin John Creeks, as well as the Little Patuxent River. Earlier research has seen ICPRB involved in reservoir TMDLs as well. This year, ICPRB will be working on the Deep Creek and Liberty reservoirs.

In Virginia, ICPRB efforts will center on production of bacteria TMDLs for Four Mile Run and Hunting Creek/Cameron Run. The study of the two tidal Northern Virginia streams will eventually include other TMDLs for the upstream nontidal areas of the watersheds.

An Anacostia trash TMDL is one of the first of its kind, and will spawn a strategy for greatly reducing the debilitating levels of junk that find their way to the river from a variety of sources. As a first step, ICPRB and Metropolitan Washington Council of Governments personnel surveying areas of the watershed to determine the types, loadings, and sources of trash. The resulting plan will be an important component of the watershed's future water quality, as well as the potential for the massive redevelopment of the watershed

in the District of Columbia.

The use of TMDLs to set pollution reduction targets for stressed waterways will continue to grow as the plans replace the failed voluntary cleanup approach for the Chesapeake Bay. The basin jurisdictions each have long lists of impaired streams and rivers. The ICPRB's experience and expertise, along with its reputation as a provider of sound science, make it a valuable partner to the Potomac jurisdictions in their restoration efforts.

The ICPRB's skill in data analysis and organization also is being used regionally as part of the cooperative Chesapeake Bay Program. Commission staff working at the bay program offices provide data management and analysis that produces high-quality, readily accessible monitoring databases that provide the tools researchers need to assess bay health and test different cleanup strategies. The 2009 focus is in completing a non-tidal water quality database, and in adapting ICPRB's Potomac Index of Biotic Integrity for non-tidal streams for use across the bay region (the index is a method of characterizing stream health based on the presence and status of plant and animal communities).

Encouraging Greater Water Resources Protection and Knowledge

The region's growth and development have challenged the quality of the Potomac's resources. The public's expectations of safe, abundant drinking water and high quality natural resources for agricultural, commercial, and recreational use are outstripping efforts to monitor, protect, and preserve those resources from human impacts. A better assessment of the impacts helps to focus existing resources.

The Potomac Basin Drinking Water Source Protection Partnership (DWSPP) is coordinating the efforts of many groups involved in public water supply to provide that focus. A voluntary alliance of water suppliers and federal, state, and local agencies working to protect the region's sources of drinking water since 2004, the group has grown to 19 different organizations, including ICPRB.

The group's priorities include improving the understanding of the impacts on drinking water from emerging contaminants, pathogens, and disinfection byproducts; the sources of those contaminants; and development of strategies to protect the source waters. Some partnership members contributed to recent USGS reports examining the presence of emerging contaminants in finished drinking water taken from the river.

Through work groups and active discussion at meetings, the partnership is

identifying strategies for source water protection as recommended by assessments prepared throughout the Potomac Basin. The workshops and study groups help the membership to keep informed about new developments regarding potential source water contamination related to agriculture, pipeline and other spills, and emergency response roles and other impacts. These types of efforts will continue in 2009, along with ongoing projects to increase knowledge about emerging contaminants. Partnership members are working with a national organization, the Water Research Foundation on topics related to drinking water. Washington metropolitan area utilities are active members of this organization, and their participation in several foundation governance boards helps communicate Potomac basin concerns to a broader audience.

The group seeks to involve more water suppliers and agencies throughout the basin to strengthen the network of organizations focused on protecting water resources, develop strategies to address a range of contaminants at their sources, and build support for these efforts.

In addition to working on source water issues, ICPRB continues to work with jurisdictions in **promoting comprehensive** water resources planning that addresses both quality and sustainability issues.

The ICPRB focus will continue a strong focus in Pennsylvania as part of its State Water Plan update (Act 220). The effort will provide a picture of the state's water resources and tools to help local governments plan for growth and development in ways that will preserve its water for drinking, agricultural, commercial, and recreational uses into the future. Under the plan, assessments of water resources throughout the state that are identifying stressed or potentially stressed watersheds that will receive special attention. The ICPRB is assisting the state's Department of Environmental Protection and other agencies in developing screening tools to assess watersheds. The ICPRB will work with DEP in assessments of Potomac basin watersheds in the state, including Antietam Creek, Toms Creek, and the Marsh and Rock creek systems. The stream systems drain into Maryland, and provide another avenue for cooperation between the Potomac jurisdictions.

For decades, ICPRB's Section for Cooperative Water Supply Operations on the Potomac (CO-OP) has played a crucial role in assuring that the more than four-million residents of the metropolitan Washington area have a reliable source of drinking water.

The CO-OP works with the three major metropolitan area water suppliers (the Washington Suburban Sanitary



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DWSPP members toured several cattle and dairy farms to learn more about water quality protection strategies.

Commission, the Washington Aqueduct Division of the U.S. Army Corps of Engineers, and Fairfax Water), which draw most of their supply from the Potomac, and operate independently most of the time. During extreme droughts, however, water demands can exceed the historical low flow of the river. Careful planning and development of reservoir storage has kept the region generally free of unnecessary restrictions on water use. During droughts, the utilities work with CO-OP to coordinate withdrawals from the Potomac, and share water stored in the Jennings Randolph and Little Seneca reservoirs. Reservoir water is released to boost river flows so that water suppliers can meet demands while leaving enough water to protect the river's biological resources. The water sent downstream from Jennings Randolph Reservoir (on the Potomac's North Branch) helps keep flows up along the river between the reservoir and the intakes, benefitting fisheries, recreationists, and other users. The water suppliers and CO-OP Section also practice operations using simulated droughts that keep all involved well versed in the procedures and reveal new management actions that increase efficiency. Staff also maintain and operate a spill model that can help track sewage or chemical spills that could impact water supply intakes.

The CO-OP also is working with stakeholders to develop new ways of operating Jennings Randolph and Savage reservoirs in a way that might better balance recreation, water quality and water supply needs. The North Branch Shared Visions Project formed an advisory group that has been providing input on preferred flows for fish habitat, fishing activities, and whitewater boating activities. The ICPRB continues to work with stakeholders to provide them with tools to understand how the reservoir system works and a means to see how well management changes can better address the multiple uses of the reservoir water. The work will provide needed information on how reservoir operations affect these important issues.

The CO-OP staff also will undertake a

periodic Water Resources Demand Study for the utilities. The study, required of the utilities every five years, examines the current status of the metropolitan area's water supplies, assesses the likely range of future increases in the region's demand for drinking water, and identifies possible new sources to meet projected demand. The study will result in a draft this year that will be incorporated into the Virginia Department of Environmental Quality water supply plan for Northern Virginia. The ICPRB staff also will consider potential impacts of climate change on the region's water supply as it concludes the full study for presentation to the utilities in early 2010.

Monitoring and Improving the Potomac's Living Resources

Restoration of American shad stocks in the Potomac is one of the true success stories over the past decade. After a successful multi-year cooperative restocking program, ICPRB staff is using limited resources and a strong cadre of volunteers and students to continue to

monitor the improvements and involve school students, who use shad restoration as a focal point in their school curricula.

Monitoring provides valuable data about how well the shad population is doing and helps ensure its continued strength. Because American shad stocks are doing poorly in other areas of the bay, the Potomac has been the egg source for all of Maryland's streams that are being restored with shad, as well as the Rappahannock in Virginia, and the Susquehanna (Maryland/

Pennsylvania). Three New Jersey schools are planning to use Potomac shad eggs as educational efforts that place shad fry in the Delaware and Raritan river systems.

The strong educational emphasis of the program will continue in 2009. Approximately 80 schools will participate, with hundreds of students taking fertilized eggs from the monitoring program to hatch grow in their classroom before release into the river. Living Classrooms of the National Capital Area, a restoration partner, is coordinating the educational program with support from private sources and Virginia's Chesapeake Bay Restoration Fund. The school program also will be featured at the National Casting Call at Fletcher's Boathouse on April 26-27. For more information about the Casting Call, visit www.nationalcastingcall.com.

Living Resources staff will continue to assist Maryland in the U.S. Environmental Protection Agency's Large River Assessment. The project will help provide EPA with a snapshot of riverine environmental status nationally. A site

survey involves many aspects of river health, including biology, habitat, and other physical and water quality parameters.

Additionally, the ICPRB's living resource efforts are part of some of the other monitoring programs noted earlier in this article.

Education, Outreach Strengthens ICPRB Projects, Potomac Stewardship

Public outreach, involvement and stewardship are a part of many of ICPRB's technical projects, reflecting a commitment to inclusive, cooperative decision-making that brings the best results. Some other ICPRB projects take outreach and stewardship as a primary focus.

With more watershed residents staying close to home instead of traveling, more attention is being paid to what's in our own backyards, local streams, and the Potomac basin. The ICPRB is planning to reach out to more citizens through workshops, watershed organization project assistance, the Potomac River Ramble, and other on-



the-ground projects, as well as our website and bi-monthly newsletter, the *Potomac Basin Reporter*.

Rain barrel workshops give citizens a chance to learn about an inexpensive and simple step to go green. New barrel owners are required to attend a workshop to learn about safely installing and maintaining the barrel and watershed-wise gardening practices that complement the barrels. Rain barrels are already constructed and are ready to install. Workshops are free and open to all, with or without the purchase of a rain barrel.

Staff also are planning several watershed-wise gardening workshops around the region that will focus on specific garden designs that can help reduce turf and stormwater runoff and increase wildlife habitat. The ICPRB's staff can customize a workshop for your group's needs. Contact the Commission via email at info@icprb.org to get more information.

In addition to workshops and restoration activities, ICPRB staff attend many events

throughout the year to help educate the public about the Potomac watershed and the myriad things each of us can do to improve it. The ICPRB regularly staffs a booth at the National Casting Call, World Water Monitoring Day, the Great Frederick Fair, and other events that celebrate the river.

The **Potomac River Ramble** is an exciting way for the public to see the river up-close by boat with professional river guides and experts in history, trees, geology, ornithology, and many other topics. This summer's Ramble will take boaters down a short stretch of the Monocacy River and on the mainstem Potomac to Seneca Breaks. No experience is necessary to join us on this trip. This is an ideal opportunity to learn to navigate a canoe or kayak, camp under the stars on the river bank, and learn from river experts making presentations to the group each day. Check our website in March for more details.

As spring quickly approaches, events, such as the Potomac River Ramble and

Rain Barrel Workshops, and important news will be posted on the ICPRB website. In addition, the website houses ICPRB's publications and information and updates about our on-going projects.

In spite of these trying times, ICPRB continues to work in many areas, all the while building partnerships and integrating efforts to increase both efficiency and support for these projects. The partnerships that ICPRB has fostered among federal, state, and local governments, citizens groups, and academic institutions continues to serve the watershed's residents. Greater public support for these projects will be needed to protect and preserve the river and resources that uniquely identify life in this region. What is or is not accomplished to protect the river during the next decade could well determine the limits of future restoration efforts.

For more information on many of these programs, visit the ICPRB website, www.potomacriver.org.

ICPRB Chairman's Report

by John T. Hines, Pennsylvania Commissioner and Chairman, 2008-2009

Surveys probing the public's attitudes toward water quality and the environment continually show that a clean environment and healthy natural resources are very important. While that support, in general, is strong, its depth can be less so, and environmental issues often fall below other priorities, particularly growth and development.

The economic recession gripping the nation is being strongly felt at the state level, where budgets must be balanced each year, and environmental initiatives always seem to be one of the first on the chopping block. While some other needs may carry short-term importance, the long-term need for clean streams and drinking water to support our quality of life remain critical.

At the same time we are facing this unprecedented financial crisis, we face environmental challenges that will take funding and commitment to resolve. Data has shown that waterways either held their own or declined under increased nutrient and silt loads from land use change (suburbanization) that in many areas accelerated under the housing bubble. A possible silver lining in the current crisis is that it may give us a chance to better addresses ongoing threats to stream quality and protection of drinking water supplies through integrated water resources

management.

Bleak economic forecasts point to the need for innovative, cooperative solutions that bring greater efficiency to these efforts. In this way, the Interstate Commission on the Potomac River Basin is a very valuable tool. This issue of the Potomac Basin Reporter highlights projects that have encouraged the Potomac basin jurisdictions to work together, gaining efficiency and avoiding wasteful duplication of effort.

My home state of Pennsylvania is working hard to fund environmental restoration through infrastructure upgrades and stormwater controls. We are focusing on Commonwealth's water resource future through the completion of our State Water Plan and the Governor's Sustainable Infrastructure Task Force Report entitle "Creating a Sustainable Solution for Pennsylvania. These plans will help to ensure the health and sustain ability of not only Pennsylvania's water resources but also of those states in which we share waters. . The ICPRB has assisted Pennsylvania and other states with these plans.

The ICPRB also focuses on the interstate subwatersheds in the region, for example stimulating better communication and cooperation between governments and citizen groups in the Monocacy watershed shared by Pennsylvania and Maryland. The

agency is involved with other interstate watersheds in similar ways.

The ICPRB is working toward preservation and enhancement of the infrastructure that helps make our current level of environmental health possible. As the region grows (the recession only has slowed that growth), the quality of the planning decisions made about the size and siting of that growth will determine the quality of our water resources and needed new infrastructure. The sound science needed for planning depends on the information we collect from stream gages and other data. Our current water resources and the availability of drinking water are largely determined by the reservoirs, wells, and other infrastructure. The ICPRB is working with the state and federal government to add resiliency to a federally managed stream gaging system that is chronically under funded.

The ICPRB's cooperative approach has



Watching the River Flow

Flow of the Potomac River measured near Washington, D.C., was well above normal in December 2008, but dropped precipitously in the new year, according provisional data from the U.S. Geological Survey. Provisional data has not been reviewed for accuracy.

The December average flow of the Potomac was about 8.7 billion gallons per day (bgd), about 17.4 percent more than the long-term average of 7.4 bgd. Daily extremes during the month ranged from a low of about 1.9 bgd on December 10, peaking for the month on December 21 at about 22.6 bgd. Water taken from the river for metropolitan water supply averaged about 400 million gallons per day (mgd).

January's low precipitation resulted in an average flow of about 6.8 bgd, or about 26.6 percent less than the long-term average of about 9.2 bgd. The river's flow ranged from a high of about 18 bgd on January 10, sinking to a low of about 3.6 bgd on January 31. Water taken for municipal supply averaged about 500 mgd.

proved valuable in the past, when some 16 reservoirs were planned for the watershed to provide adequate drinking water and flood control. Public sentiment against the plan allowed room for an ICPRB-led study that showed that water demands could be met with greater cooperation and minimal infrastructure. Because of agreements to cooperatively manage the resource, only the Jennings Randolph Reservoir on the North Branch Potomac was needed. The effort preserved the environmental character of the watershed.

That comprehensive planning continues today in the form of the North Branch Potomac Shared Visions process, which brings river groups of canoe/kayakers, anglers, industry, and government together to determine how management rules can be altered to achieve greater use of the resource by all groups. These are just a few examples of how ICPRB represents value to the states, the federal government, other stakeholders, and residents of the Potomac basin.

The ICPRB continues to work with the jurisdictions in helping conserve and protect natural resources, protecting the drinking water and environmental health of the basin. The federal government may step up its partnership with the Potomac jurisdictions through the Water Resources Development Act of 2007, which provides, if authorized, some funds that would enable ICPRB to continue to support the growing list of needed projects in the watershed..

It is important for environmental managers, with strong public support, to use this period of slowed economic activity to push forward with plans and ideas that will protect and improve water quality sustainably, leaving the legacy of a high quality environment to those who come after us. In this way, we can be ready with strong, publically supported plans when the economy rebounds.

Commissioners Pass Away

District of Columbia Commissioner **Lloyd Preslar** passed away in on December 28, 2008, after a long battle with cancer at 73 years of age. He served the District and ICPRB as a commissioner beginning on June 1995.

Preslar brought a wealth of experiences to ICPRB, and his dry wit and southern drawl were unmistakable. After a tour in the Army, Preslar became a journalist, working in his native North Carolina for the *Winston-Salem Journal*, and later at the *Baltimore Sun*. He later became a lobbyist and was a partner at several firms, primarily dealing

with international aviation, including getting the French Concorde airliner landing rights in the U.S. After retiring, Preslar became administrator of the First Baptist Church in Washington, D.C.

Preslar's participation in the Commission waned somewhat because of his responsibilities to the church, and in battling his disease. Asked once what kept him interested in the commission, he responded that one of the greatest, simplest joys in his life was taking his small motorboat out on the metropolitan Potomac. "Its where my mind unwinds," he said, "And it needs to be preserved."

Former ICPRB Federal Commissioner James D. Range passed away on January 20, 2009 from kidney cancer. He was 63. Range served as an ICPRB Federal Commissioner from 1991-1994. His experience in environmental law and politics brought greater federal visibility to the Commission. The outspoken Range served in a variety of positions, including staff of the National Commission on Water Quality, minority counsel to the Senate Committee on Environment and Public Works, and as chief counsel to former Sen. Howard Baker while the latter was Majority Leader in the early and mid 1980s.

Range worked tirelessly in these positions, and later worked as a government affairs liaison for a number of corporations. He was most proud, however, of starting the Theodore Roosevelt Conservation Partnership in 2002. He also served on the boards of Ducks Unlimited, Trout Unlimited, the Wetlands America Trust, Recreational Boating and Fishing Foundation, and others, many of which are partnership members.

Range was a strong supporter of ICPRB, particularly the American Shad Restoration Program. He was instrumental in accelerating construction of the fish passage at Little Falls Dam, an essential piece of the effort to restore the fish, and promoted the effort strongly on Capital Hill..

He was founder of the National Casting Call, an annual event that brings a conservation message to legislators and federal agencies, and in recent years has included the shad program as a focus. This year's event, to be held on April 26-27, 2009 at Fletcher's Boat House in the District will be held in Range's honor. For more information, visit www.nationalcastingcall.com.

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